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ABSTRACT OF THE DISCLOSURE

1 A router has a network topology table and a number of resource tables
2 corresponding to network areas. In response to a user's request, one of
3 entries of the topology table and one of the resource tables are referenced and
4 a traversable area along the route to the destination and links of the area
5 which satisfy a user-specified QoS value are selected. A calculation is
6 performed on the selected links according to the Dijkstra algorithm to find a
7 shortest path to the destination if the referenced entry indicates that the
8 destination is in the local area of the router. If the entry indicates otherwise,
9 the calculation is continued until a shortest path tree is found for all area
10 border routers of the traversable area or until the calculation terminates if
11 that tree is not found for all such routers, and a route having an optimum
12 QoS value is determined from the shortest path tree.